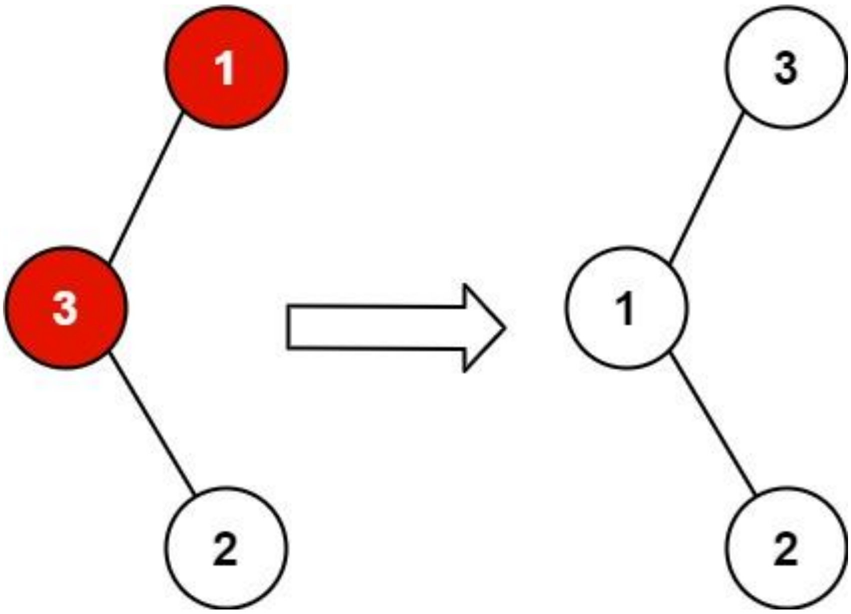
Recover Binary Search Tree (View)

You are given the `root` of a binary search tree (BST), where the values of **exactly** two nodes of the tree were swapped by mistake. *Recover the tree without changing its structure.*

Example 1:

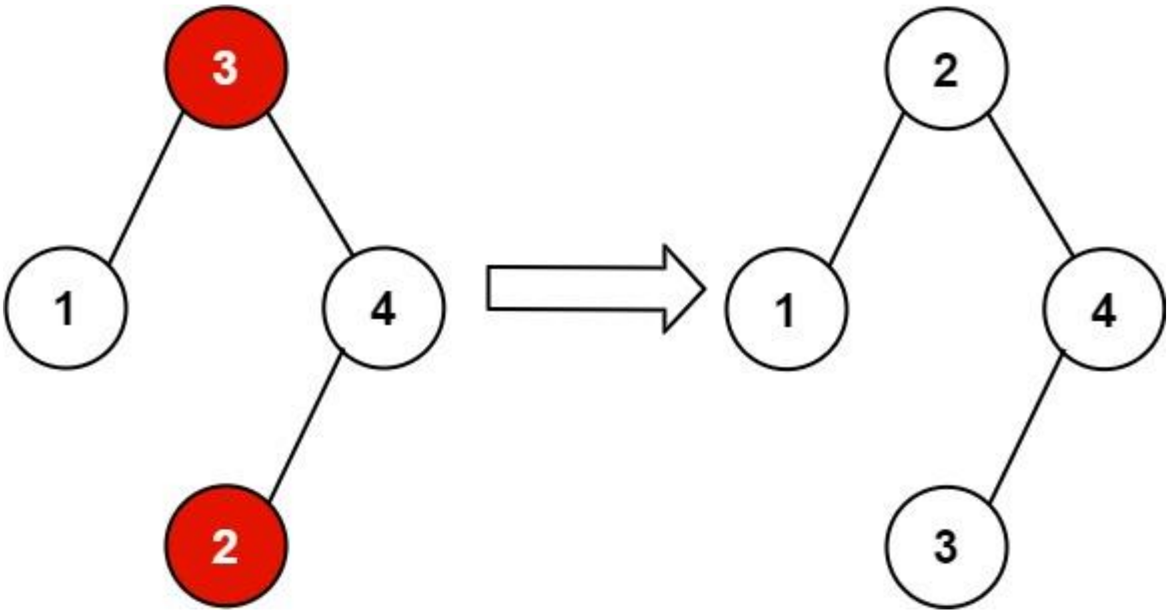


```
Input: root = [1,3,null,null,2]

Output: [3,1,null,null,2]

Explanation: 3 cannot be a left child of 1 because 3 > 1. Swapping 1 and 3 makes
the BST valid.
```

Example 2:



```
Input: root = [3,1,4,null,null,2]

Output: [2,1,4,null,null,3]

Explanation: 2 cannot be in the right subtree of 3 because 2 < 3. Swapping 2 and 3
makes the BST valid.
```

Constraints:

- The number of nodes in the tree is in the range `[2, 1000]`.
- -2^{31} `<= Node.val <=` 2^{31} `- 1`

Follow up: A solution using `O(n)` space is pretty straight-forward. Could you devise a constant `O(1)` space solution?